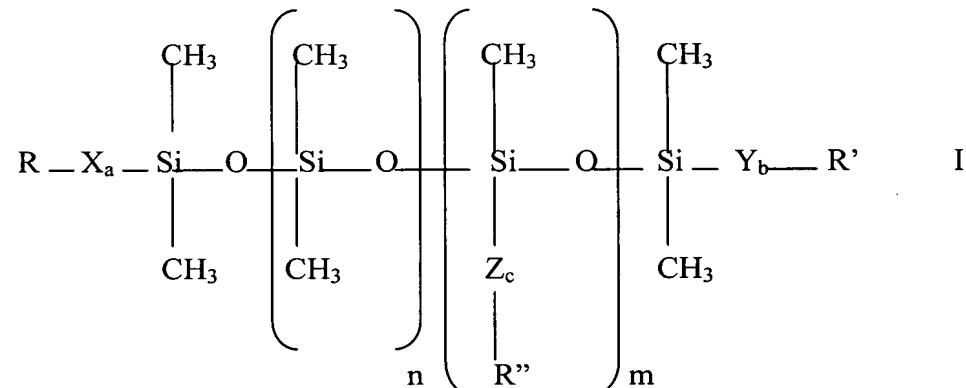


Claims:

1. A composition for improving the properties of a cementitious composition, comprising a fluid blend of
  - 5 (i) at least one polyalkylene oxide, the alkylene oxide units being ethylene and propylene oxides;
  - (ii) at least one aqueous paraffin emulsion; and
  - (iii) at least one siloxane compound that is at least one of liquid and soluble in at least one of water and aqueous alkali.
- 10 2. A composition according to claim 1, in which the siloxane is selected from those that correspond to the general formula I:



where m and n are independently from 1-2000, preferably from 1-500 and more preferably from 1-200, a, b, and c are independently either 0 or 1 and X, Y and Z are selected from

- 25
- O-;
  - O-(CH<sub>2</sub>)<sub>1-30</sub>-, this moiety being at least one of linear, branched and containing at least one ring;
  - 30 -(CH<sub>2</sub>)<sub>1-30</sub>-, this moiety being at least one of linear, branched and containing at least one ring;
  - CH<sub>2</sub>-CH<sub>2</sub>-CH<sub>2</sub>-O-;

-CH<sub>2</sub>-CH<sub>2</sub>-CH<sub>2</sub>-O-CH<sub>2</sub>-CHOH-CH<sub>2</sub>-;  
-CH<sub>2</sub>-CH<sub>2</sub>-CH<sub>2</sub>-O-CH<sub>2</sub>-CHOH-CH<sub>2</sub>-O-;  
-CH<sub>2</sub>-CH<sub>2</sub>-CH<sub>2</sub>-O-CH<sub>2</sub>-CHOH-CH<sub>2</sub>-N-;

5 and R, R' and R'' are independently selected from at least one of hydrogen, C<sub>1-100</sub> alkyl, C<sub>6-30</sub> aryl, C<sub>7-30</sub> aralkyl; C<sub>7-30</sub> alkaryl; C<sub>1-30</sub> hydroxyalkyl; C<sub>3-200</sub> polyhydroxyalkyl; polyether consisting of from 2-200 identical or different C<sub>1-15</sub> oxyalkylene units; C<sub>1-30</sub> aminoalkyl; polyiminopolyalkylene having from 1-20 identical or different C<sub>2-15</sub> alkylene units; polyiminopolyoxyalkylene having from 1-  
10 20 identical or different C<sub>2-15</sub> oxyalkylene units; C<sub>3-30</sub> quaternary ammonium, optionally completely or partially ionised with at least one anion; C<sub>4-30</sub> betaine; carboxyl, optionally completely or partially ionised with any suitable cation; C<sub>4-30</sub> polycarboxyalkyl, optionally completely or partially ionised with at least one cation; sulpho group, optionally completely or partially ionised with at least one cation;  
15 thiosulpho group, optionally completely or partially ionised with at least one cation; epoxide group; glycidyl; acrylate; C<sub>1-30</sub> ester; polyester consisting of from 2-200 C<sub>2-15</sub> diacid and diester monomer units; and esters of inorganic acids, all alkyl chains being at least one of linear, branched and comprising at least one ring.

20 3. A composition according to claim 1 or claim 2, in which the siloxane is selected from those of Formula I in which a, b, and c are all 1 and X, Y and Z are selected from

-O-(CH<sub>2</sub>)<sub>1-30</sub>-, this moiety being linear or branched;  
25 -(CH<sub>2</sub>)<sub>1-30</sub>-, this moiety being linear or branched;  
-CH<sub>2</sub>-CH<sub>2</sub>-CH<sub>2</sub>-O-CH<sub>2</sub>-CHOH-CH<sub>2</sub>-;

30 and R, R' and R'' are independently selected from at least one of hydrogen; hydroxy; polyether consisting of from 2-200 identical or different C<sub>2-6</sub> oxyalkylene units, with the proviso that, if there is present more than one type of oxyalkylene unit, there shall be present at least two of each unit; C<sub>3-30</sub> quaternary ammonium, optionally completely or partially ionised with at least one anion; C<sub>4-30</sub> betaine;

carboxyl, optionally completely or partially ionised with at least one cation; sulpho group, optionally completely or partially ionised with at least one cation; thiosulpho group, optionally completely or partially ionised with at least one cation; glycidyl; and acrylate; all alkyl chains being at least one of linear, branched and comprising at least one ring.

- 5
4. A composition according to any one of claims 1-3, in which the siloxane is selected from those of Formula I in which m and n are independently selected from 1-200, a, b, and c are all 1 and X, Y and Z are selected from

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-O-(CH<sub>2</sub>)<sub>1-12</sub>-;

-(CH<sub>2</sub>)<sub>1-12</sub>-;

-CH<sub>2</sub>-CH<sub>2</sub>-CH<sub>2</sub>-O-CH<sub>2</sub>-CHOH-CH<sub>2</sub>-;

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and R, R' and R'' are independently selected from at least one of hydrogen; hydroxy; polyether consisting of from 2-200 identical or different C<sub>2-6</sub> oxyalkylene units, with the proviso that, if there is present more than one type of oxyalkylene unit, there shall be present at least two of each unit; C<sub>3-30</sub> quaternary ammonium, optionally completely or partially ionised with at least one anion; C<sub>4-30</sub> betaine; carboxyl, optionally completely or partially ionised with at least one cation; glycidyl; and acrylate; all alkyl chains being capable of being linear or branched.

- 20
5. A composition according to any one of claims 1-4, in which the siloxane is selected from those of Formula I in which m is from 1-30 and n is from 1-100, a, b, and c are all 1 and X, Y and Z are selected from

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-O-(CH<sub>2</sub>)<sub>1-6</sub>-;

-(CH<sub>2</sub>)<sub>1-6</sub>-;

-CH<sub>2</sub>-CH<sub>2</sub>-CH<sub>2</sub>-O-CH<sub>2</sub>-CHOH-CH<sub>2</sub>-;

30

and R, R' and R'' are independently selected from at least one of hydrogen; hydroxy; polyether consisting of from 2-200 identical or different C<sub>2-6</sub> oxyalkylene

units, with the proviso that, if there is present more than one type of oxyalkylene unit, there shall be present at least two of each unit; C<sub>3-20</sub> quaternary ammonium, optionally completely or partially ionised with at least one anion; C<sub>4-10</sub> betaine and carboxyl, optionally completely or partially ionised with at least one cation; all alkyl chains being capable of being linear or branched.

- 5        6. A composition according to any one of claims 1-5 in which the polyalkylene oxide is polyethylene oxide.
- 10      7. A composition according to any one of claims 1-6 in which the weight-average molecular weight of the polyalkylene oxide is 100,000-8,000,000, preferably 2,000,000-5,000,000.
- 15      8. A composition according to any one of claims 1-7 in which the paraffin emulsion is an ionically-emulsified paraffin mixture with a fusion point of 45-51°C and a particle size of less than 2µM.
- 20      9. A method of modifying the properties of a cementitious composition, comprising adding to a fluid cementitious mix a composition according to any one of claims 1-8.
10. A cementitious mix having improved properties, which composition comprises a chemical composition according to claims 1-8.